

## Wireless CCTV Surveillance Protects Industrial Facilities

### THE CUSTOMER

This Aluminum manufacturing facility owns and operates one of the world's largest aluminum smelters. Built on a 480-hectare site in Jebel Ali, the complex's major facilities comprise a one million metric tonne per annum primary aluminum smelter, a 2,350-megawatt power station (at 30 C), a large carbon plant, casting operations with a capacity of more than 1,276,000 metric tonnes per annum, a 30 million gallon per day seawater desalination plant, laboratories, port and storage facilities. The Jebel Ali site has the capacity to produce more than one million metric tonnes of high-quality finished aluminum products a year, in three main forms: foundry alloy for automotive applications; extrusion billet for construction, industrial, forging and transportation purposes; and high purity aluminum for the electronics and aerospace industries. More than 300 customers are served in at least 50 countries predominantly in the Far East, Europe, the ASEAN region, the Middle East and Mediterranean region, and the Americas.

### THE CHALLENGE

A large industrial aluminum plant in the Middle East required the installation of a video surveillance system to monitor a long expanse of coastline. Because the plant is bordered completely on one side by the Arabian Gulf, it was impossible to directly connect the video cameras to the plant's wired network. Another obvious challenge facing this deployment was the extreme temperatures present in this part of the world. During the equipment installation, the temperature measured 47 C in the shade – so clearly, the customer required a solution capable of reliable operation in extreme temperatures.



### THE SOLUTION

The customer selected EION's Radio System solution in 5 GHz to wirelessly connect the cameras along the coastline to the control room at the plant. In total, 7 high-definition cameras for video surveillance were placed at intervals along the beach.

Three base station sectors were required to provide coverage along the entire length of the beach. The required area is shown in the diagram above. The sectors were backhauled to the control room using the plant's internal fibre network.

Each high-definition camera was connected directly to an EION subscriber station. Using the Quality of Service (QoS) settings of the radio system, the subscriber stations were each allocated 10 Mbps of total throughput; 8 Mbps uplink and 2 Mbps downlink. The high uplink ratio was required to transmit the high-definition video streams back to the control room where they were monitored and archived. The downlink channel was required to send PZT (pan zoom and tilt) instructions to the video camera from the control room.



## WHY DID THE CUSTOMER CHOOSE EION?

The EION Radio System was able to fulfill the two major requirements from the customer. The high capacity of the system was able to handle the large amount of traffic being generated by the different video streams and using the built-in QoS settings the network was configured with a priority on traffic in the uplink direction. Secondly, the ruggedized EION equipment was capable of reliable operation in the extreme heat at the site.

In addition to the reasons above, since the EION equipment operates in the unlicensed band, the end customer did not require a license to operate the equipment that eliminates any ongoing costs – effectively reducing the operational expenses (OPEX) to zero.



**EION**

### StarPlus 5300

**300 Mbps MIMO Outdoor Base Radio**

- 2x2 MIMO BS up to 300 Mbps
- 2xGigE port or 1xGigE 1xFiber port
- Rugged enclosure
- Surge protector

[More details](#)



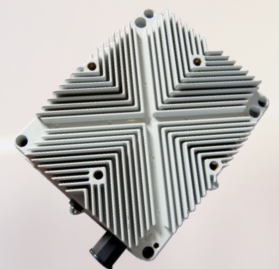
**EION**

### TeraLink Gen2 PTP & PTMP

**867 Mbps High Power 4.9 GHz to 6.0 GHz Outdoor 2x2 MU-MIMO Wave-2 Radio**

- IEEE 802.11ac Wave-2 compliant and Backward compatible with 802.11a/n
- 2 x 2 MIMO up to 867 Mbps PTP Radio
- Supports public safety frequency band 4.9GHz
- Frequency Range: 4.940 GHz to 6.0 GHz
- Channels: 5 and 10 MHz along with 20, 40 and 80 MHz
- Output Power: Up to 27 dBm per chain or aggregated 30dBm
- Dual GigE ports or 1xGigE 1xFiber port
- Antenna Options: External high gain antenna or Integrated 24dBi antenna
- IP67 metal rugged enclosure

[More details](#)



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